REMARKS

Claims 6 to 13, as amended, and new claims 39-67 are now pending after entry of the above amendments and additions. Claims 1 to 5 and 14 to 38 have been cancelled without prejudice to applicants' rights to file one or more divisional application to pursue the subject matter of those claims. Claims 39 to 67 have been added to cover preferred embodiments that are present in the specification and previous claims. For the reasons that follow, it is submitted that no new matter has been introduced so that all claim changes and additions should be entered at this time. Reconsideration of the application in view of the present amendments is respectfully requested.

The amendment to claim 6 finds basis in the application as originally filed, for example, see original claim 1. A formal amendment has been made to claim 7 and to claim 9. Textual amendments having been made to claims 10, 11, 12, and 13, these finding clear basis in the specification as originally filed. Claim 39 substantially corresponds to original claim 1, but with the specific recitation of generic claim 6. New claims 40, 41, 42, and 43 correspond to the subject matter of original claims 2, 3, 4, and 5. New claim 44 substantially corresponds to the subject matter of original claim 14, but with amendments to more clearly distinguish the invention thereof from the prior art, and in particular, including the recitation of "laser crystallisation", so as to make claim 44 generic with claim 6. Fresh claim 45 corresponds to original claim 15. Fresh claim 46 to original claim 16. New claim 47 corresponds to original claim 17. New claim 48 corresponds to original claim 18. New claim 49 corresponds to the subject matter of original claim 21. New claim 50 corresponds to original claim 22. New claim 51 corresponds to original claim 24. New claim 52 corresponds to original claim 24. New claim 53 corresponds to original claim 25. New claim 54 corresponds to original claim 26. New claim 55 corresponds to the subject matter of original claim 27. New claim 56 corresponds to the subject matter of original claim 27. New claim 57 corresponds to original claim 28. New claim 58 corresponds to original claim 29. New claim 59 corresponds to original claim 30. New claim 60 corresponds to original claim 31. New claim 61 corresponds to original claim 32. New claim 62 corresponds to original claim 33, but recited to "laser crystallisation". New claim 63 corresponds to original claim 34. New claim 64 corresponds to original claim 35. New independent claim 65 corresponds to original independent claim 36, and includes the recitation

of "laser crystallisation". New claim 66 corresponds to original claim 37. New claim 67 corresponds to original claim 38.

It is respectfully submitted that the pending independent claims, namely claims 6, 39, 44, 51, 62, and 65 are generic upon one another, all being directed towards "laser crystallisation".

Election/Restrictions

The Applicant notes the Examiner's comments. It is respectfully submitted that the fresh claim set, and the independent claims thereof, are linked and generic upon one another for the reasons given above. Particularly, that they each relate to laser crystallisation. Thus, all current claims should be examined together at this time.

Claim Rejections - 35 USC§ 102

The Examiner raised objection to previous claims 6 to 13 as being anticipated by CATHEY et al. (US patent 5,329,207). It is respectfully submitted that the fresh claim set, particularly the independent claims thereof, are distinguished over CATHEY for reasons given below. CATHEY discloses a field emission structure as produced on micro-grain polysilicon substrates. CATHEY uses iron beam bombardment to remove grain boundaries, and is essentially therefore the conventional field emission "Spindt tip" technology discussed on pages 1 and 2 of the present Application. It is respectfully submitted that CATHEY uses conventional etching to form the spindt tips, as evidenced by Figure 3(C). The Examiner's attention is also drawn to Figure 3(D), which shows laser crystallisation of the silicon layer to be planar. That is to say, in CATHEY there is no patterning of the laser beam prior to exposure of the amorphous material.

In more detail, CATHEY discloses a field emission display (FED). CATHEY suggests that known processes have a drawback in that the integrated circuit drivers are not possible on the same substrate as the tips (column 1, lines 23 to 25). CATHEY also teaches that through the use of a relatively thick substrate of macro-drain polycrystalline silicon, the best of the low cost and integrated drivers can be realized (column 1, lines 35 to 38). CATHEY teaches macro-grain polycrystalline substrates which are relatively thick (i.e. greater than 300 microns). In such case the atoms are arranged in units, but the unit cells are not in a regular arrangement with each other. The grain boundaries are essentially defects in the substrate, and CATHEY provides a

means for overcoming the substrate defects. (Column 1, lines 58 to 68). CATHEY teaches a method of fabricating emitter tips on a macro-grain polycrystalline substrate comprising reforming the substrate through recrystallisation or amorphizing the substrate by ion implantation (column 2, lines 46 and 47). Particularly, the Examiner's attention is drawn to column 5, lines 60 to 68. This discloses that the grain boundaries can be hydrogenated to improve mobility of the electrons within the substrate 11. As shown in Figure 3D, another option is to rechrystallise or reform the amorphous or polysilicon layer 8 to form single crystalline silicon. After the recrystallisation step, the silicon layer is patterned 23 as illustrated in Figure 3E. An etching step is then performed thereby defining the emitter tips 13. In contradistinction, in the present invention it is the laser crystallisation step that defines and forms the emitter sites or tips.

The present invention therefore provides an improvement over the art in providing a much simplified, less complex, and less expensive method of forming emitter tips directly from laser crystallisation. It is therefore respectfully submitted that the fresh claim set is allowable over the cited art, and in particular, over CATHEY.

An information disclosure statement is enclosed, but it is believed that the references cited thereon do not affect the patentability of the present claims.

CONCLUSION

Based on the above amendments and remarks, it is submitted that this Application is in condition for Allowance. The Examiner is invited to telephone the undersigned if there are any remaining issues requiring resolution before a Notice of Allowance can be issued.

Respectfully submitted,

Date: 4/28/06

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